

## CLAIMS

- 1 1. A computer implemented method for handling database requests for client systems over a  
2 network, the method comprising:  
3 receiving from a client a database request;  
4 determining an assigned database server for handling the database request from a group  
5 of available database servers;  
6 prompting the assigned database server to load a database corresponding to the database  
7 request;  
8 providing the database request to the assigned database server for handling the database  
9 request; and  
10 providing a result of handling the database request to the client.
- 1 2. The method of claim 1, further comprising:  
2 determining that the database request is a request to create a database;  
3 generating a database identifier for the database; and  
4 mapping the database to the assigned database server using the database identifier.
- 1 3. The method of claim 2, further comprising:  
2 receiving a subsequent database request containing the database identifier;  
3 using the database identifier to determine the assigned database server; and  
4 providing the subsequent database request to the assigned database server for handling  
5 the subsequent database request.

- 1 4. The method of claim 1, further comprising:  
2 responsive to determining that there is no database server assigned to handle the database  
3 request,  
4 assigning a selected database server from the group of available database servers as the  
5 assigned database server; and  
6 updating a mapping of previously created databases to their respective database servers to  
7 include the assignment of the selected database server to the database.
- 1 5. The method of claim 1, further comprising:  
2 responsive to a failure in the handling of the database request by the assigned database  
3 server,  
4 assigning the database request to an alternative database server selected from the group of  
5 available database servers; and  
6 providing the database request to the alternative database server for handling the database  
7 request.
- 1 6. The method of claim 1, further comprising:  
2 responsive to an elapsed time for the handling of the database request by the assigned  
3 database server exceeding a threshold,  
4 instructing the assigned database server to terminate the handling of the database request;  
5 assigning the database request to an alternative database server selected from the group  
6 of available database servers; and

7 providing the database request to the alternative database server for handling the database  
8 request.

1 7. The method of claim 1, further comprising:  
2 maintaining location information for a plurality of request making clients corresponding  
3 to a particular database associated with the database request;  
4 assigning the database request to an alternative database server selected from the group  
5 of available database servers by analyzing the location information for the  
6 plurality of request making clients; and  
7 providing the database request to the alternative database server for handling the database  
8 request.

1 8. The method of claim 7, wherein the alternative database server is assigned based upon a  
2 determination that a substantial number of the request making clients are located closer to the  
3 alternative database server than the assigned database server.

1 9. The method of claim 1, further comprising:  
2 assigning the database request to an alternative database server selected from the group of  
3 available database servers, based upon a comparison of a first expected load on  
4 the assigned database server and a second expected load on the alternative  
5 database server.

1 10. The method of claim 1, further comprising:

2 assigning the database request to an alternative database server selected from the group of  
3 available database servers; and  
4 providing the database request to the alternative database server for handling the database  
5 request.

1 11. A system for handling database requests for client systems over a network, the system  
2 comprising:

3 a request handling module, which receives from a client a database request;

4 a plurality of database servers, which receive and handle database requests; and

5 a master control module, in communication with the request handling module and the

6 plurality of database servers, which receives the database request, determines an

7 assigned database server from the plurality of database servers for handling the

8 database request, prompts the assigned database server to load a database

9 corresponding to the database request, whereby the database request is provided

10 to the assigned database server for handling and a result of handling the database

11 request is provided to the client.

1 12. The system of claim 11, wherein the master control module determines that the database  
2 request is a request to create a database, generates a database identifier for the database, and  
3 maps the database to the assigned database server using the database identifier.

1 13. The system of claim 12, wherein the master control module receives a subsequent  
2 database request containing the database identifier, uses the database identifier to determine the

3 assigned database server, and provides the subsequent database request to the assigned database  
4 server for handling the subsequent database request.

1 14. The system of claim 11, wherein the master control module responds to determining that  
2 there is no database server assigned to handle the database request by assigning a selected  
3 database server from the plurality of database servers as the assigned database server, and  
4 updating a mapping of previously created databases to their respective database servers to  
5 include the assignment of the selected database server to the database.

1 15. The system of claim 11, wherein the master control module responds to a failure in  
2 handling the database request by the assigned database server by assigning the database request  
3 to an alternative database server selected from the plurality of database servers, and identifying  
4 the alternative database server to the request handler responsive to the database request.

1 16. The system of claim 11, wherein the master control module assigns the database request  
2 to an alternative database server selected from the plurality of database servers, and identifies the  
3 alternative database server to the request handler responsive to the database request.

1 17. The system of claim 11, wherein the request handler responds to an elapsed time for  
2 handling the database request by the assigned database server exceeding a threshold by  
3 instructing the assigned database server to terminate the handling of the database request, and  
4 wherein the master control module then assigns the database request to an alternative database  
5 server selected from the plurality of database servers.



8 receiving a set of information about a database request from a request handler;  
9 determining from the set of information that the assigned database server corresponds to  
10 the database request; and  
11 sending an identification of the assigned database server to the request handler.

1 22. The method of claim 21, wherein the set of information about the database request  
2 includes a database identifier for the previously existing database, and the database identifier is  
3 used to determine that the previously existing database corresponds to the assigned database  
4 server.

1 23. The method of claim 21, further comprising:  
2 responsive to determining that the previously existing database is not currently assigned  
3 to a database server,  
4 assigning a selected database server from the plurality of database servers as the assigned  
5 database server; and  
6 updating a mapping that correlates previously created databases to their respective  
7 database servers to include the assignment of the selected database server to the  
8 database identifier.

1 24. The method of claim 21, further comprising:  
2 assigning the database request to an alternative database server selected from the plurality  
3 of database servers, and identifying the alternative database server to the request  
4 handler.





6 assigned database server selected from the plurality of database servers, and  
7 determining that an assigned database server corresponds to a database by  
8 examining a set of information about the database request; and  
9 a request handler communications module, for receiving the set of information about the  
10 database request from a request handler, and sending an identification of the  
11 assigned database server to the request handler.

1 29. The apparatus of claim 28, wherein the set of information about the database request  
2 includes a database identifier for the previously existing database, and the database identifier is  
3 used to determine that the previously existing database corresponds to the assigned database  
4 server.

1 30. The apparatus of claim 28, wherein the database server managing module responds to  
2 determining that the previously existing database is not currently assigned to a database server by  
3 assigning a selected database server from the plurality of database servers as the assigned  
4 database server, and updating a set of database identifiers that correlate previously created  
5 databases to their respective database servers to include the assignment of the selected database  
6 server to the database identifier.

1 31. The apparatus of claim 28, wherein the database server managing module assigns the  
2 database request to an alternative database server selected from the plurality of database servers,  
3 and identifies the alternative database server to the request handler.

- 1 32. The apparatus of claim 28, further comprising:  
2 a database assignment module, in communication with the database server managing  
3 module, which maintains location information for a plurality of request making  
4 clients corresponding to a particular database, and assigns the database request to  
5 an alternative database server selected from the plurality of database servers by  
6 analyzing the location information for the plurality of request making clients.
- 1 33. The apparatus of claim 32, wherein the alternative database server is assigned based upon  
2 a determination that a substantial number of the request making clients are located closer to the  
3 alternative database server than the assigned database server.
- 1 34. The apparatus of claim 28, further comprising:  
2 a database assignment module, in communication with the database server managing  
3 module, which assigns the database request to an alternative database server  
4 selected from the plurality of database servers, based upon a comparison of a first  
5 expected load on the assigned database server and a second expected load on the  
6 alternative database server.
- 1 35. A computer program product, for handling database requests for client systems over a  
2 network, the computer program product stored on a computer readable medium and adapted to  
3 perform operations comprising:  
4 communicating with a plurality of database servers that receive and handle database

5 requests;  
6 assigning databases to the database servers, including an assignment of a previously  
7 existing database to an assigned database server selected from the plurality of  
8 database servers;  
9 receiving a set of information about a database request from a request handler;  
10 determining from the set of information that the assigned database server corresponds to  
11 the database request; and  
12 sending an identification of the assigned database server to the request handler.

1 36. The computer program product of claim 35, wherein the set of information about the  
2 database request includes a database identifier for the previously existing database, and the  
3 database identifier is used to determine that the previously existing database corresponds to the  
4 assigned database server.

1 37. The computer program product of claim 35, wherein the operations further comprise:  
2 responsive to determining that the previously existing database is not currently assigned  
3 to a database server,  
4 assigning a selected database server from the plurality of database servers as the assigned  
5 database server; and  
6 updating a persistent set of database identifiers that correlate previously created databases  
7 to their respective database servers to include the assignment of the selected  
8 database server to the database identifier.

1 38. The computer program product of claim 35, wherein the operations further comprise:  
2 assigning the database request to an alternative database server selected from the plurality  
3 of database servers, and identifying the alternative database server to the request  
4 handler.

1 39. The computer program product of claim 35, wherein the operations further comprise:  
2 maintaining location information for a plurality of request making clients corresponding  
3 to the previously existing database; and  
4 assigning the database request to an alternative database server selected from the plurality  
5 of database servers by analyzing the location information for the plurality of  
6 request making clients.

1 40. The computer program product of claim 39, wherein the alternative database server is  
2 assigned based upon a determination that a substantial number of the plurality of request making  
3 clients are located closer to the alternative database server than the assigned database server.

1 41. The computer program product of claim 35, wherein the operations further comprise:  
2 assigning the database request to an alternative database server selected from the plurality  
3 of database servers, based upon a comparison of a first expected load on the  
4 assigned database server and a second expected load on the alternative database  
5 server.

1 42. The computer program product of claim 41, wherein the alternative database server is

2 assigned based upon a failure in handling the database request by the assigned database server.